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| 10/582,170 | 06/08/2006 | Kei Hagiwara | R2184.0504/P504 | 8765 |
| 24998 7590 07/24/2008 DICKSTEIN SHAPIRO LLP 1825 EYE STREET NW Washington, DC 20006-5403 | | | | |
| EXAMINER | | | | |
| AGUSTIN, PETER VINCENT | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,170

Applicant(s)

HAGIWARA, KEI

Examiner

Peter Agustín

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

1. This application is a national stage entry (371) of PCT/JP05/18601, filed October 3, 2005.
2. Claims 1-26 are currently pending.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
6. The abstract of the disclosure is objected to because it contains multiple paragraphs. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US 2005/0025013) in view of Sakai et al. (US 7,298,679).

In regard to claim 1, Yamamoto discloses an information recording method of recording information by irradiating a laser beam onto a multilayer optical recording medium (see Figures 7A & 7B), comprising: a trial writing process of performing trial writing of data on a trial writing area of the optical recording medium with recording power of the laser beam being gradually changed, and obtaining optimal recording power based on a reproduced signal of the data that are trial-written in advance of a recording operation start (see Figure 8, steps S9, S10, S13 & S14); and starting the recording operation using the adjusted optimal recording power (S18).

In regard to claim 2, Yamamoto discloses that the trial writing area on which the trial writing process is performed is located at an inner circumference of a target recording layer of the optical recording medium (see PCA area in Figures 7A & 7B), and recording on the target recording layer that should be recorded on from an outer circumference to the inner circumference (see paragraph 0030).

In regard to claim 7, Yamamoto discloses that the recording power adjustment process adjusts the adjustment amount of the recording power according to a kind of the optical recording medium (paragraph 0005: "type of a medium").

In regard to claim 9, Yamamoto discloses recording on the target recording layer that should be recorded on from the outer circumference to the inner circumference (see paragraph 0030).

In regard to claim 12, Yamamoto discloses that the recording-start position is at the outermost circumference position (see paragraph 0030); and the recording power adjustment process starts the recording operation using the optimal recording power obtained at the trial writing process (Figure 8, step S18).

In regard to claim 13, Yamamoto discloses that the multilayer optical recording medium is an optical recording medium that has two or more recording layers that are recorded on by an opposite track path (OTP) method based on the DVD+R specifications (see paragraph 0012); and the trial writing process and the recording power adjustment process are carried out when a target recording layer should be recorded on from the outer circumference to the inner circumference of the optical recording medium (see paragraph 0030).

However, Yamamoto does not explicitly disclose: in regard to claim 1, a recording power adjustment process of adjusting the optimal recording power according to a recording-start position; in regard to claim 3, a running trial writing process of obtaining the optimal recording power based on the reproduced signal of the data that are trial-written during the recording operation, wherein the recording power adjustment process adjusts the recording power after starting the recording operation to the optimal recording power obtained by the running trial writing process; in regard to claim 4, that the recording power adjustment process adjusts the adjustment amount according to the recording-start position; in regard to claim 5, that the recording power adjustment process adjusts the adjustment amount using a linear approximation with reference to a radial position of the recording-start position; in regard to claim 6, that the recording power adjustment process is carried out only when the recording-start position is located at a radial position greater than a predetermined radial position of the optical recording medium; in regard to claim 8, that the recording power adjustment process adjusts the adjustment amount of the recording power with reference to an adjustment amount of the recording power beforehand stored in a non-volatile memory of an information recording apparatus; in regard to claim 9, that the trial writing process performs trial writing on a trial writing area located at an

inner circumference and a trial writing area located at an outer circumference of a target recording layer of the optical recording medium, and obtains optimal recording power of each trial writing area, and the recording power adjustment process adjusts the optimal recording power obtained from the trial writing area of the inner circumference with reference to the optimal recording power obtained from the trial writing area of the outer circumference according to a recording-start position; in regard to claim 10, that the recording power adjustment process carries out linear approximation of the optimal recording power obtained from the trial writing area of the inner circumference and the optimal recording power obtained from the trial writing area of the outer circumference, and obtains the adjustment amount according to the radial position of the recording-start position of the optical-recording medium; in regard to claim 11, that the recording power adjustment process is carried out only when the recording-start position is located in an area with a radial position greater than a predetermined radial position of the optical-recording medium, and the optimal recording power is adjusted using a difference between the optimal recording power obtained from the trial writing area of the inner circumference and the optimal recording power obtained from the trial writing area of the outer circumference; and in regard to claim 12, that the trial writing process is performed only on the trial writing area located in the outer circumference of the target recording layer of the optical recording medium, and obtains the optimal recording power.

Sakai et al. disclose: in regard to claim 1, a recording power adjustment process of adjusting the optimal recording power according to a recording-start position (Figure 2, step 202: "optimum write power associated with disk radial position"); in regard to claim 4, that the recording power adjustment process adjusts the adjustment amount according to the recording-

start position (Figure 2, step 202: “optimum write power associated with disk radial position”); in regard to claim 5, that the recording power adjustment process adjusts the adjustment amount using a linear approximation with reference to a radial position of the recording-start position (see Figure 5); in regard to claim 6, that the recording power adjustment process is carried out only when the recording-start position is located at a radial position greater than a predetermined radial position of the optical recording medium (e.g., in Figure 5, a radial position greater than r_i); in regard to claim 8, that the recording power adjustment process adjusts the adjustment amount of the recording power with reference to an adjustment amount of the recording power beforehand stored in a non-volatile memory of an information recording apparatus (column 6, lines 16-33); in regard to claim 9, that the trial writing process performs trial writing on a trial writing area located at an inner circumference and a trial writing area located at an outer circumference of a target recording layer of the optical recording medium, and obtains optimal recording power of each trial writing area (see Figure 5), and the recording power adjustment process adjusts the optimal recording power obtained from the trial writing area of the inner circumference with reference to the optimal recording power obtained from the trial writing area of the outer circumference according to a recording-start position (Figure 2, step 202: “optimum write power associated with disk radial position”); in regard to claim 10, that the recording power adjustment process carries out linear approximation of the optimal recording power obtained from the trial writing area of the inner circumference and the optimal recording power obtained from the trial writing area of the outer circumference, and obtains the adjustment amount according to the radial position of the recording-start position of the optical-recording medium (see Figure 5); in regard to claim 11, that the recording power adjustment process is

carried out only when the recording-start position is located in an area with a radial position greater than a predetermined radial position of the optical-recording medium (e.g., in Figure 5, a radial position greater than r_i), and the optimal recording power is adjusted using a difference between the optimal recording power obtained from the trial writing area of the inner circumference and the optimal recording power obtained from the trial writing area of the outer circumference (see the equations in columns 3 & 4); and in regard to claim 12, that the trial writing process is performed only on the trial writing area located in the outer circumference of the target recording layer of the optical recording medium, and obtains the optimal recording power (see Figure 5). It would have been obvious to one of ordinary skill in the art at the time of invention to have applied these teachings of Sakai et al. to the method of Yamamoto, the motivation being to determine optimum write power during high speed rotation (column 10, lines 32-38).

Sakai et al. disclose: in regard to claim 3, a running trial writing process of obtaining the optimal recording power based on the reproduced signal of the data that are trial-written during the recording operation, wherein the recording power adjustment process adjusts the recording power after starting the recording operation to the optimal recording power obtained by the running trial writing process (column 1, lines 12-24). It would have been obvious to one of ordinary skill in the art at the time of invention to have applied these teachings of Sakai et al. to the method of Yamamoto, the motivation being to control laser power independent of coating irregularities and inclination of the optical disk (column 1, lines 12-24).

Claims 14-26 have similar limitations as claims 1-13; thus, they are rejected on the same grounds.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Matsumoto et al. (US 6,504,803) disclose an optical disk apparatus. Figure 2B shows a graph illustrating how a recording begin power depends on the position in a circumferential position of an optical disk.

Matsumoto (US 7,046,600) discloses an optical disc apparatus wherein the recording linear velocity of test recording in OPC for obtaining the initial value of the laser power is changed in accordance with a position on the optical disc from which actual recording starts.

Koide (US 2004/0120235) a laser power control method comprising the steps of acquiring a reflected light level by test writing into a test writing area provided in an optical disk, and conducting a running OPC for controlling the laser so as to obtain the preferred reflected light level, while considering the linear velocity at the recording start location as a linear velocity on the inner peripheral side of the optical disk and gradually increasing the rotation speed after the recording start till the target rotation speed of said disk is reached.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Agustin whose telephone number is (571) 272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Patent Examiner
Art Unit 2627